

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for calibrating one or more printheads, the method comprising:

printing a first reference image using a first portion of image forming points of a first printhead;

printing a first diagnostic image using a second portion of image forming points of the first printhead, wherein the first portion of image forming points comprises a first segment of a column of image forming points and wherein the second portion comprises a second segment of the column of image forming points on the first printhead and wherein the first reference image and the first diagnostic image at least partially overlap, wherein the first reference image is printed while the first printhead is at a first horizontal position and wherein the first diagnostic image is printed while the first printhead is at the first horizontal position;

detecting a first optical density of the combined first reference image and the first diagnostic image; and

determining a compensation value based upon the first optical density; ~~wherein the first portion of image forming points comprises a first segment of a column of image forming points and wherein the second portion comprises a second segment of the column of image forming points on the first printhead;~~

printing a second reference image with the first portion of the first printhead while the first printhead is at a second horizontal position;

printing a second diagnostic image with the second portion while the first printhead is at a third horizontal position positively offset from the second horizontal position by a first offset distance;

detecting a second optical density of the combined second reference image and the second diagnostic image, wherein the compensation value is additionally based upon the second optical density.

2. (Canceled)

3. (Canceled)

4. (Canceled)
5. (Canceled)
6. (Original) The method of Claim 1 including advancing the print media a distance such that the first reference image and the diagnostic image are in vertical alignment.
7. (Original) The method of Claim 1 including adjusting a time at which the first portion dispenses ink based upon the compensation value.
8. (Original) The method of Claim 1 including forming images using the first portion and the second portion at different times based upon the compensation value.
9. (Canceled)
10. (Canceled)
11. (Currently Amended) The method of Claim 1 ~~40~~, wherein the first reference image includes at least one mark having a width and wherein the first offset distance is no greater than the width.
12. (Currently Amended) The method of Claim 1 ~~40~~, wherein the first horizontal position and the second horizontal position have a common location.
13. (Currently Amended) The method of Claim 1 ~~40~~ including:
 - printing a third reference image with the first portion while the first printhead is at a fourth horizontal position;
 - printing a third diagnostic image with the second portion while the first printhead is at a fifth horizontal position positively offset from the fourth horizontal position by a second offset distance greater than the first offset distance; and
 - detecting a third optical density of a combination of the third reference image and the third diagnostic image, wherein the compensation value is determined based additionally upon the third optical density.

14. (Original) The method of Claim 13, wherein the third reference image includes at least one mark, wherein each mark has a width and wherein the third offset distance is less than the width.

15. (Original) The method of Claim 13, wherein the third horizontal position is offset from the second horizontal position in a first direction and wherein the fifth horizontal position is offset from the third horizontal position in the first direction.

16. (Previously Presented) The method of Claim 15 including:
printing a fourth reference image with the first portion while the first printhead is at a sixth horizontal position;
printing a fourth diagnostic with the second portion while the first printhead is at a seventh horizontal position negatively offset from the sixth horizontal position by a third distance offset; and
detecting a fourth optical density of a combination of the fourth reference image and the fourth diagnostic image, wherein the compensation value is determined based additionally upon the fourth optical density.

17. (Previously Presented) The method of Claim 16 including:
printing a fifth reference image using the first portion while the first printhead is at an eighth horizontal position;
printing a fifth diagnostic image using the second portion while the first printhead is at a ninth horizontal position negatively offset from the eighth horizontal position by a fourth distance greater than the third distance; and
detecting a fifth optical density of a combination of the fifth reference image and the fifth diagnostic image, wherein the compensation value is determined based additionally upon the fifth optical density.

18-52 (Canceled)

53. (New) The method of claim 1, wherein the first reference image and the first diagnostic image have non-overlapping portions in the horizontal direction.